

sulfur contained in organic sulfur compounds contained in the fuel stream to nickel sulfide;

b) introducing a gasoline fuel stream which contains an oxygenate into said nickel reactant desulfurization station; and

c) said oxygenate being present in said gasoline fuel stream in an amount which is effective to provide an effluent gasoline fuel stream at an exit end of said nickel reactant station which effluent gasoline fuel stream contains no more than about 0.05 ppm sulfur by weight.

8.(amended) A method for desulfurizing a gasoline fuel stream so as to convert the gasoline fuel stream into a low sulfur content fuel, which low sulfur content fuel is suitable for use in a fuel processing section of a fuel cell power plant, said method comprising the steps of:

a) providing a nickel reactant desulfurization station which is operative to convert sulfur contained in organic sulfur compounds contained in the fuel stream to nickel sulfide;

b) introducing a gasoline fuel stream which contains an oxygenate into said nickel reactant desulfurization station; and

c) said oxygenate being present in said gasoline fuel stream in an amount which is effective to provide a continuous gasoline fuel stream at an exit end of said nickel reactant station which continuous gasoline fuel stream contains on average no more than about 0.05 ppm sulfur by weight.

9.(amended) A method for desulfurizing a gasoline fuel stream so as to convert the gasoline fuel stream into a low sulfur content fuel, which low sulfur content fuel is suitable for use in a fuel processing section in a fuel cell power plant, said method comprising the steps of:

a) providing a nickel reactant desulfurization station which is operative to convert sulfur contained in organic sulfur compounds contained in the fuel stream to nickel sulfide;

b) introducing a gasoline fuel stream which contains an oxygenate into said nickel reactant desulfurization station; and

c) said oxygenate being converted to isobutylene and methanol by said nickel catalyst in amounts which are effective to inhibit carbon deposition in said nickel catalyst station and provide a continuous gasoline fuel stream at an exit end of said nickel reactant station which continuous gasoline fuel stream contains no more than about 0.05 ppm sulfur by weight.

10.(amended) A method for desulfurizing a gasoline fuel stream so as to convert the gasoline fuel stream into a low sulfur content fuel, which low sulfur content fuel is suitable for use in a fuel processing section in a fuel cell power plant, said method comprising the steps of:

- a) providing a nickel reactant desulfurization station which is operative to convert sulfur contained in organic sulfur compounds contained in the fuel stream to nickel sulfide;
- b) introducing a gasoline fuel stream which contains an oxygenate into said nickel reactant desulfurization station, said oxygenate being present in said gasoline fuel stream in an amount which is effective to provide a low sulfur content gasoline fuel stream at an exit end of said nickel catalyst station which low sulfur content gasoline fuel stream contains no more than about 0.05 ppm by weight sulfur; and
- c) said oxygenate being converted to isobutylene and methanol by said nickel reactant during said desulfurizing step, said low sulfur content gasoline fuel stream being formed so long as said nickel reactant continues to convert the oxygenate.

11.(amended) A method for desulfurizing a liquid gasoline fuel stream so as to convert the gasoline fuel stream into a low sulfur content fuel, which low sulfur content fuel is suitable for use in a fuel processing section in a fuel cell power plant, said method comprising the steps of:

- a) providing a nickel reactant desulfurization station which is operative to convert sulfur contained in organic sulfur compounds contained in the fuel stream to nickel sulfide;
- b) maintaining said nickel reactant desulfurization station at a temperature in the range of about 300°F to about 450°F;
- c) introducing a liquid gasoline fuel stream which contains an oxygenate into said

nickel reactant desulfurization station, said oxygenate being present in said gasoline fuel stream in an amount which is effective to provide a low sulfur content gasoline fuel stream at an exit end of said nickel reactant station which low sulfur content gasoline fuel stream contains no more than about 0.05 ppm by weight sulfur; and
d) said oxygenate being converted to isobutylene and methanol by said nickel reactant during said desulfurizing step, said low sulfur content gasoline fuel stream being formed so long as said nickel reactant continues to convert the oxygenate.

20.(amended) A method for desulfurizing a liquid gasoline fuel stream so as to convert the gasoline fuel stream into a low sulfur content fuel, which low sulfur content fuel is suitable for use in a fuel processing section in a fuel cell power plant, said method comprising the steps of:

- a) providing a nickel reactant desulfurization station which is operative to convert sulfur contained in organic sulfur compounds contained in the fuel stream to nickel sulfide;
- b) maintaining said nickel reactant desulfurization station at a temperature in the range of about 300°F to about 450°F; and
- c) introducing a mixture of a fuel cell selective oxidizer output recycle, which recycle contains hydrogen and water; and a liquid gasoline fuel, into said nickel reactant desulfurization station, said selective oxidizer output recycle being present in an amount which is effective to provide a low sulfur content gasoline fuel stream at an exit end of said nickel reactant station, which low sulfur content gasoline fuel stream contains no more than about 0.05 ppm by weight sulfur.

22.(amended) A method for desulfurizing a gaseous fuel stream so as to convert the gaseous fuel stream into a low sulfur content fuel, which low sulfur content fuel is suitable for use in a fuel processing section in a fuel cell power plant, said method comprising the steps of:

- a) providing a nickel reactant desulfurization station which is operative to convert sulfur contained in organic sulfur compounds contained in the fuel stream to nickel sulfide;
- b) introducing a gaseous fuel stream which contains a fuel cell selective oxidizer

recycle mixture of hydrogen and water into said nickel reactant desulfurization station;
and

c) said selective oxidizer recycle mixture being present in said gaseous fuel stream in an amount which is effective to provide an effluent gaseous fuel stream at an exit end of said nickel reactant station which effluent gaseous fuel stream contains no more than about 0.05 ppm by weight sulfur.

23.(amended) The method of Claim [21] 22 wherein the gaseous fuel is selected from the group consisting of methane, ethane, propane and butane.

24.(amended) The method of Claim [21] 22 wherein the desulfurization station operates in a temperature range of about 250°F to about 450°F.

25.(amended) The method of Claim [21] 22 wherein said recirculated portion of the selective oxidizer output is between 1% and 10% of the total selective oxidizer output.

REMARKS

This is a continuation application of co-pending USSN 09/470,483, filed December 22, 1999. Prosecution of the parent application is ongoing. Enclosed are copies of the parent application as originally filed, and a copy of the declaration for the parent application as originally filed. This amendment includes all of the changes to the claims and the specification of the parent application which have been made up to the date of filing of this application. A clean copy of the claims as presently amended is enclosed, and a clean copy of the amended paragraphs of the specification is also enclosed.

Claims 1-11 and 20-25 are pending in this continuation application. These claims have been rejected in a final rejection in the parent application dated September 24, 2001.

In the final rejection, Claims 1-8 and 20-25 were rejected as being obvious over Setzer et al '746; and Claims 9-11 were rejected as being obvious over Setzer et al